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IN THE CLAIMS

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Please amend the claims as follows:

1. (Currently Amended)   A method for searching for pilots in a wireless communication system, comprising:

searching over a designated code space for peaks in a received signal and providing a set of detected peaks;

forming a plurality of dwell windows for the detected peaks, wherein the dwell windows have variable sizes and cover variable numbers of detected peaks both being determined based on locations of the detected peaks in the designated code space; and

searching over the dwell windows for peaks in the received signal and providing a set of one or more candidate peaks.

2. (Currently Amended) The method of claim 1, wherein the designated code space comprises phases for all or a portion of a pseudo-random noise (PN) sequence used to generate the pilots.

3. (Currently Amended) The method of claim 1, wherein the forming the plurality of dwell windows for the detected peaks includes

placing an individual search window on each detected peak, and

combining overlapping individual search windows.

4. (Currently Amended) The method of claim 3, wherein the number of peaks to be returned for each dwell window is equal to determined based on the number of individual search windows combined to form the dwell window.

5. (Original) The method of claim 3, further comprising:

sorting the detected peaks based on their locations in the designated code space.

6. (Currently Amended) The method of claim 3, wherein the forming the plurality of dwell windows for the detected peaks further includes

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limiting the number of overlapping individual search windows to be combined for each dwell window.

7. (Currently Amended) The method of claim 3-6, wherein the forming the plurality of dwell windows for the detected peaks includes

limiting the number of overlapping individual search windows to be combined for a particular each dwell window is limited to based on the number of candidate peaks provided by the search over the dwell window windows.

8. (Currently Amended) The method of claim 3-6, wherein the overlapping individual search windows are combined such that overlap between the dwell windows is minimized.

9. (Currently Amended) The method of claim 3-6, wherein the overlapping individual search windows are combined such that larger detected peaks are biased toward the center of the dwell windows.

10. (Currently Amended) The method of claim 1-3, wherein the dwell windows are non-overlapping.

11. (Currently Amended) The method of claim 3, wherein each individual search window has a particular predetermined size.

12. (Currently Amended) The method of claim 11, wherein the predetermined size of each individual search window is 5 PN chips or less.

13. (Original) The method of claim 3, wherein the individual search window is centered at each detected peak.

14. (Original) The method of claim 1, wherein the dwell windows are formed such that each detected peak is included in only one dwell window.

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15. (Original) The method of claim 1, wherein the communication system is a CDMA system.

16. (Original) The method of claim 15, wherein the CDMA system conforms to IS-95 or cdma2000 standard.

17. (Original) A method for searching for pilots in a wireless communication system, comprising:

searching over a designated code space for peaks in a received signal and providing a set of detected peaks;

forming a plurality of dwell windows for the detected peaks by placing an individual search window of a particular size on each detected peak, and combining overlapping individual search windows, wherein the number of peaks to be returned for each dwell window is equal to the number of individual search windows combined to form the dwell window; and

searching over the dwell windows for peaks in the received signal and providing a set of one or more candidate peaks selected from among the peaks returned for the dwell windows.

18. (Currently Amended) A method for searching for pilots in a CDMA communication system, comprising:

performing a plurality of sets of searches for peaks in a received signal, wherein each set of searches is performed over a respective set of search windows, and wherein at least one set includes search windows having variable sizes and covering variable numbers of expected peaks both being determined selected based on locations of expected peaks in the received signal.

19. (Currently Amended) The method of claim 18, wherein further comprising:

returning variable numbers number of peaks are returned for the variable-size search windows.

20. (Currently Amended) The method of claim 18, wherein further comprising:

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forming a first set of search windows includes with equal-size, non-overlapping windows and covers covering a designated code space.

21. (Currently Amended) The method of claim 18, wherein further comprising:

forming the variable-size search windows are formed by combining overlapping fixed-size windows placed on peaks detected by a first set of searches.

22. (Currently Amended) A demodulator in a wireless communication system, comprising:

a searcher operative to search over a designated code space for peaks in a received signal and to provide a set of detected peaks; and

a controller operative to form a plurality of dwell windows for the detected peaks, wherein the dwell windows have variable sizes and cover variable numbers of detected peaks both being determined based on locations of the detected peaks in the designated code space, and wherein the searcher is further operative to search over the dwell windows for peaks in the received signal and to provide a set of one or more candidate peaks.

23. (Original) The demodulator of claim 22, further comprising:

one or more finger processors operative to process and acquire the set of one or more candidate peaks.

24. (Original) The demodulator of claim 22, wherein the controller is operative to place an individual search window on each detected peak, and
combine overlapping individual search windows to form the dwell windows.

25. (Currently Amended) The demodulator of claim 22, wherein the designated code space includes phases for all or a portion of a pseudo-random noise (PN) sequence used to generate pilots.

26. (Currently Amended) A CDMA terminal device, comprising:

a searcher operative to search over a designated code space for peaks in a received signal and to provide a set of detected peaks; and

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a controller operative to form a plurality of dwell windows for the detected peaks, wherein the dwell windows have variable sizes and cover variable numbers of detected peaks both being determined based on locations of the detected peaks in the designated code space, and wherein the searcher is further operative to search over the dwell windows for peaks in the received signal and to provide a set of one or more candidate peaks.

27. (Original) The CDMA terminal device of claim 26, further comprising:

one or more finger processors operative to process and acquire the set of one or more candidate peaks.

28. (Original) The CDMA terminal device of claim 26, wherein the controller is operative to

place an individual search window on each detected peak, and

combine overlapping individual search windows to form the dwell windows.

29. (Currently Amended) The CDMA terminal device of claim 26, wherein the designated code space includes phases for all or a portion of a pseudo-random noise (PN) sequence used to generate pilots.

30. (New) The method of claim 1, further comprising:

determining the number of peaks to return for each dwell window based on the number of the number of detected peaks covered by the dwell window.

31. (New) The method of claim 17, wherein the forming the plurality of dwell windows for the detected peaks comprises

limiting the number of overlapping individual search windows to be combined for each dwell window to a predetermined number.

32. (New) The method of claim 17, wherein the dwell windows are non-overlapping.

33. (New) The method of claim 17, wherein the individual search windows are combined such that overlap between the dwell windows is minimized or avoided.

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